

# INTERNATIONAL BSS IN MEDICAL PRACTICES (ARCAL XLIX) (RLA/9/035) 11 New

## MODEL PROJECT

### CORE FINANCING

YEAR	Experts		Group Activity	Equipment	Fellowships		Scientific Visits		Group Training	Sub-Contracts	Misc. Comp.	TOTAL
	m/d	US \$	US \$	US \$	m/d	US \$	m/d	US \$	US \$	US \$	US \$	US \$
1999	1/0	14,700	18,000	25,900	12/0	41,400	0/0	0	0	0	0	100,000
2000	1/0	15,450	18,000	72,500	20/0	72,000	0/0	0	18,000	0	0	195,950
2001	0/0	0	18,000	99,000	20/0	75,000	0/0	0	18,000	0	0	210,000

First Year Approved: 1999

**OBJECTIVES:** To improve radiation protection in medicine through the implementation of the BSS in selected hospitals located in each participating country in Latin America.

**BACKGROUND:** Medical application, among all practices involving ionizing radiation, is responsible for the highest contribution to exposure of the population. Because most medical practices are clearly justified and for the direct benefit of the exposed individual, less attention has been given to medical exposures than to other radiation applications, and radiation protection regulations have addressed mainly occupational and public exposures. However, there is a great potential for dose reduction to patients (and, consequently, to health care professionals and the public); investigations on patient doses in diagnostic X-ray have shown dose differences of up to two orders of magnitude for the same type of examination. Also, recent investigations on accidental exposures to the patients indicate the need to improve regulations and other protective actions in this area with support from the Agency, the implementation of the BSS, now being studied in most countries, will improve radiation protection.

**PROJECT PLAN:** The BSS will be implemented in selected hospitals through the training of specialists in the use of these standards and through the assistance of regional experts.

**NATIONAL COMMITMENT:** The governments and the participant institutions will provide staff, facilities and operational costs. Brazil, Chile, Columbia, Cuba, Mexico and Peru will participate in the project.

**AGENCY INPUT:** Expert services, provision of basic instrumentation to the participating hospitals, support for three workshops/seminars, professional training (fellowships) and reproduction of education and training material.

**PROJECT IMPACT:** The project should improve radiation protection in medical practice through the implementation of the BSS in selected hospitals, after which all hospitals and clinics in Latin America can benefit. The reference centres (diagnostic X-ray facilities) in the region should produce a normalized protocol for QA for diagnostic X-rays; national regulations will exist for diagnostic X-ray facilities (including design and performance of new and old equipment); teaching material (written and in magnetic media) will be created; a professional accreditation process will be introduced; a protocol will be developed for radiation protection evaluation (auditing); a document will be prepared defining national needs to improve radiation protection in the region; and another document will specify image quality criteria (including exposure tables). Also, methodologies will be set up and demonstrated for implementing the BSS in medical facilities in the participating countries. Specifically, it is expected to complement QA and radiation protection instrumentation at the reference centres; train about 15 medical physicists to be absorbed by the centres; implement radiation protection and QA procedures (including retake analysis and patient dose measurements) in about 20 diagnostic X-ray facilities; reinforce the licensing activities of the regulatory authorities; and implement image quality systems in the participating countries.